PTO/SB/33 (07-05)
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U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number: 10601-001002
	Application Number 10/630,501	Filed July 30, 2003
	First Named Inventor Robert L. Turner et al.	
	Art Unit 1745	Examiner Raymond Alejandro

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a Notice of Appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

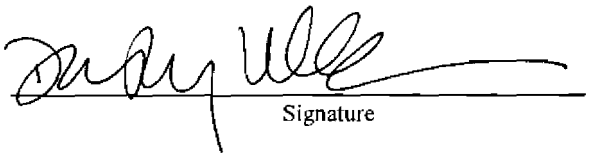
I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

☒ attorney or agent of record
(Reg. No.) 33,814

☐ attorney or agent acting under 37 CFR 1.34.
Registration number if acting under 37 CFR 1.34



Signature

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November 17, 2006
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below'.

☐ Total of **no.** forms are submitted.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	: Robert L. Turner et al.	Art Unit	: 1745
Serial No.	: 10/630,501	Examiner	: Raymond Alejandro
Filed	: July 30, 2003	Conf. No.	: 7907
Title	: AMORPHOUS MIXTURES OF ELECTROCHEMICALLY ACTIVE AND INACTIVE METAL ELEMENTS FOR USE AS ELECTRODE COMPOSITIONS		

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PRE-APPEAL BRIEF

This brief is directed to clear errors set forth in the final Office Action mailed 8/17/06 and Advisory Action mailed 10/16/06.

Claims 1-10 and 15-17 currently are pending, of which claims 1 and 17 are independent. Claims 1-10 and 15-17 stand rejected under 35 U.S.C. § 102 as allegedly anticipated by no fewer than 7 references. Each reference is separately discussed in the Response filed 7/20/06. Not one of the references that the Examiner uses necessarily and unambiguously discloses an electrode material having the chemical composition set forth in Applicants' claims, in the form of an amorphous mixture, as the claims further require.

As evidenced by the Examiner's statements in the Advisory Action dated 10/16/06, the Examiner continues to cling to a plainly incorrect understanding of basic materials science and continues to misapply the law regarding inherent anticipation. For at least these two reasons, every rejection under 35 U.S.C. § 102 is clearly erroneous, and should be reversed.

THE EXAMINER MISUNDERSTANDS THE TECHNOLOGY

Every claim requires an electrode material that has a certain chemical composition and is "in the form of an amorphous mixture." In rejecting the claims, the Examiner ignores the claim requirement regarding the material's structure and focuses only on the chemical composition. His stated rationale is that materials having identical chemical compositions necessarily have identical structures:

> **Examiner's note:** accordingly, products of identical chemical composition can not have mutually exclusive properties, and thus, the claimed characteristic (i.e., remaining an amorphous mixture), is necessarily present in the prior art material.

(Office Action mailed 3/29/06; Final Office Action mailed 8/17/06; see also Advisory Action mailed 10/16/06, p. 5).

This statement is contrary to basic materials science, which establishes that a material is defined by its chemical composition **and** structure (i.e., the way in which the particular chemical elements are put together). Applicants specifically disproved the Examiner's stated rationale by pointing out the well-known, simple, and undisputed example of graphite and diamond, both of which have identical chemical compositions (i.e., carbon), yet have different and mutually

exclusive structures and properties because the carbon atoms are assembled differently in the two materials. (See Response filed 7/20/06, p. 5; Response filed 10/10/06, p. 2). The Examiner failed to offer a reasoned rebuttal to Applicants' evidence. Instead, all he stated was that Applicants were not claiming graphite or diamond:

> [C]urrently, we are not dealing with graphite or diamond .... [A]pplicant's classic example (i.e. graphite vs. diamond) calls for specific materials, compositions and crystalline microstructures, which are certainly quite different from applicant's claimed amorphous material.

(Advisory Action mailed 10/16/06, p. 6). This makes no sense whatsoever and certainly cannot form the basis for rejections based upon inherency.

The Examiner further misunderstands how manufacturing methods affect the properties of the resulting product. (See Response filed 7/20/06, p. 6; Response filed 10/10/06, p. 2). Again, this is textbook materials science. The process affects how the chemical elements are assembled, and thus the resulting structure and properties of the material. It is a key point in the present case because the cited prior art references do not unambiguously describe the methods used to prepare the various compositions disclosed therein. Accordingly, it is impossible to determine whether the compositions necessarily have the structure called for in Applicants' claims. The Examiner, however, completely misses this point. Instead, he summarily dismisses Applicants' discussion of manufacturing processes as irrelevant because Applicants' claims are directed towards a composition, and not a process. (Advisory Action mailed 10/16/06, p. 7). This is further evidence of a fundamental misunderstanding of the technology.

THE EXAMINER MISAPPLIES THE LAW OF INHERENCY

The law regarding inherency is clear. Mere probabilities and possibilities cannot, as a matter of law, establish anticipation based upon inherency:

> To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. ***Inherency, however, may not be established by probabilities or possibilities.*** *The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'*

(MPEP § 2112 (IV) quoting *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (emphasis added).) Applicants previously supplied a copy of MPEP § 2112 (IV) to the Examiner, which fully discusses the law of inherent anticipation, as Appendix A to the Response filed 10/10/06. The Examiner's statements, however, reveal that he is basing the inherency rejections on probabilities and possibilities in direct contradiction to the governing law:

> Assuming arguendo that there is no description of how the composition/material of the prior art was prepared, then the examiner contends that ***there is a substantially degree of probability*** that the process of making the composition/material of the prior art can produce a composition/material exhibiting a non-crystalline structure.
>
> * * *
>
> Don't you think that if it is impossible to determine whether or not the alloys are inherently amorphous, then, ***there is a reasonable certainty or expectation*** to believe the alloy disclosed in the prior art ***might in fact be amorphous***?
>
> * * *
>
> [S]ince the manufacturing method might affect the final (or lack of) structure of the manufactured material [of the prior art], ***it is very difficult for the examiner to make a clear determination*** about the crystallinity and/or amorphousness of the material/composition in the prior art. ***The greatest uncertainty in this case*** is whether or not the JP '112, the JP '221 and the WO '532 do inherently teach the "amorphousness" of their materials.

(Advisory Action mailed 10/16/06, pp. 3, 4, and 5 (emphasis added)).

The Examiner has failed to provide a supportable basis for establishing anticipation by inherency under the governing legal standards. Applicants have rebutted each point the Examiner raised not with attorney argument, but with well-established facts. These facts included the example of graphite and diamond to demonstrate that materials having the same chemical composition do not necessarily have the same structure and properties. They also included the self-evident, indisputable truth that the method of manufacturing a material determines its structure. Thus, a description of a material's chemical constituents, without a detailed description of its structure or the method used to prepare it, does not unambiguously

define its structure. The outstanding rejections, therefore, are without basis, contrary to law, and cannot stand.

CONCLUSION

For at least the reasons stated above and previously in the record, Applicants respectfully submits that the rejections under 35 U.S.C. § 102 are unsupported and should be reversed.

This brief is being submitted with a Pre-Appeal Brief Request for Review, Notice of Appeal, and corresponding payment authorization. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: November 17, 2006

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